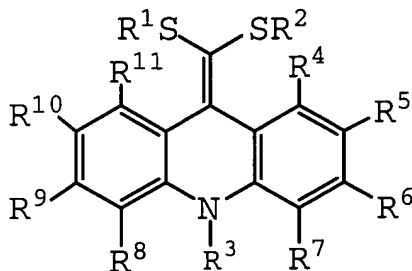


This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A compound of the formula:



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wherein R¹ and R² are independently selected from alkyl, substituted alkyl, aryl, substituted aryl, aralkyl and substituted aralkyl groups of 1-20 carbon atoms ~~and can be~~
10 ~~joined together to form a ring~~, each of R⁴ to R¹¹ is independently a substituent which can contain from 1 to 50 atoms selected from C, H, N, O, S, P, Si and halogen atoms, and R³ is selected from alkyl, substituted alkyl, aryl, substituted aryl, aralkyl and substituted aralkyl groups.

Claim 2 (Original): The compound of Claim 1 wherein at least one of R⁴ to R¹¹ is selected from alkyl, alkoxy, halogen, amino, or amino substituted with one or two alkyl or aryl groups and the remaining of R⁴ to R¹¹ are hydrogen.

Claim 3 (Original): The compound of Claim 1 wherein each of R^4 to R^{11} is a hydrogen atom.

Claim 4 (Original): The compound of Claim 1 wherein R^3 is selected from methyl, phenyl, benzyl, substituted benzyl, 2-naphthyl, and p-anisyl groups.

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Claim 5 (Original): The compound of Claim 1 wherein at least one of R^1 and R^2 is selected from alkyl substituted with a group selected from sulfonate salt groups, sulfate salt groups, phosphonate salt groups, phosphate salt groups, 5 carboxylate salt groups and ammonium salt groups and phosphonium salt groups.

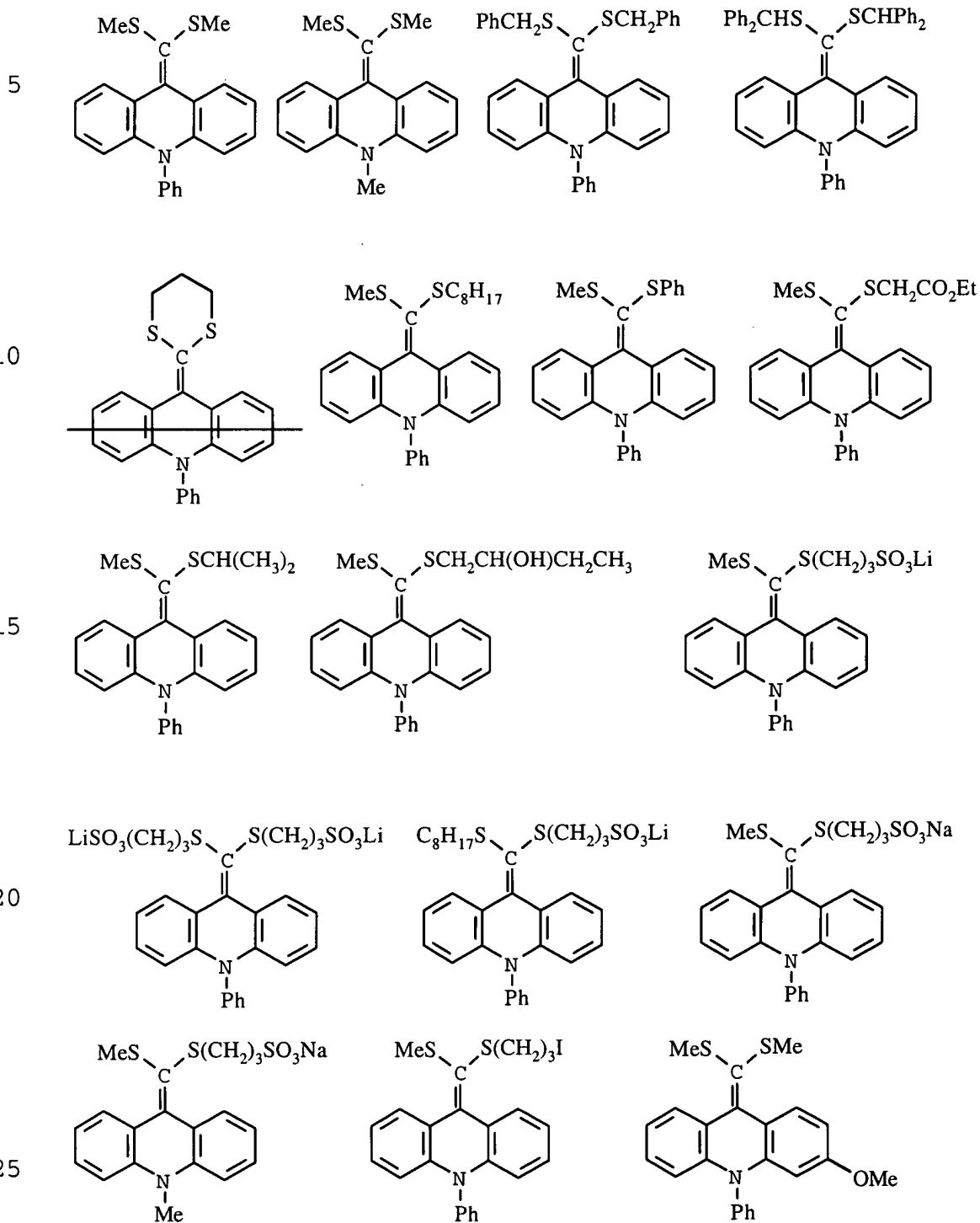
Claim 6 (Original): The compound of Claim 5 wherein at least one of R^1 and R^2 is an alkyl group substituted with a sulfonate salt group.

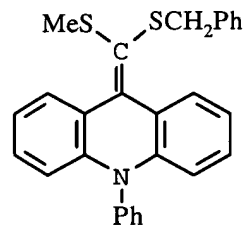
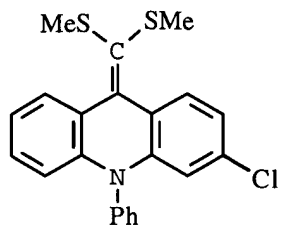
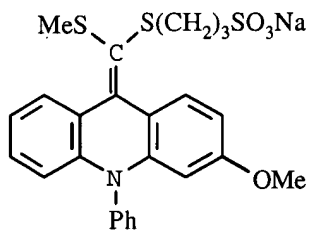
Claim 7 (Original): The compound of Claim 5 wherein at least one of R^1 and R^2 is an alkyl group substituted with a phosphate salt group.

Claim 8 (Original): The compound of Claim 6 wherein R^3 is selected from phenyl, substituted phenyl, benzyl, and substituted benzyl groups.

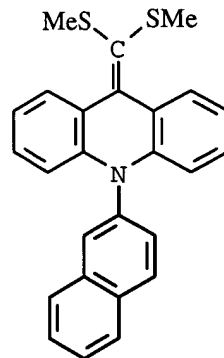
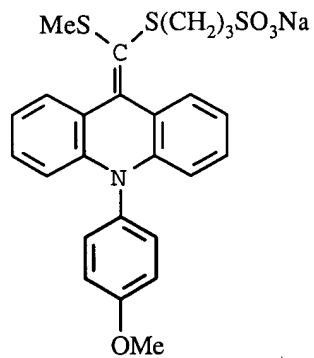
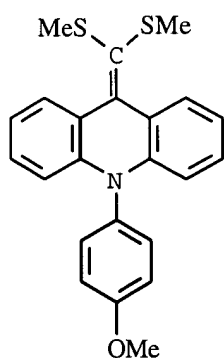
Claim 9 (Original): The compound of Claim 7 wherein R^3 is selected from phenyl, substituted phenyl, benzyl, and substituted benzyl groups.

Claim 10 (Currently Amended): The compound of Claim 1
selected from the group

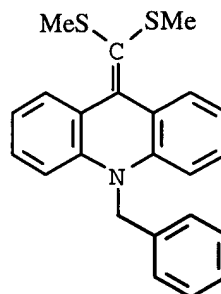
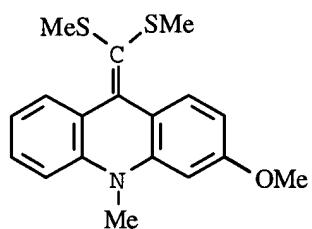
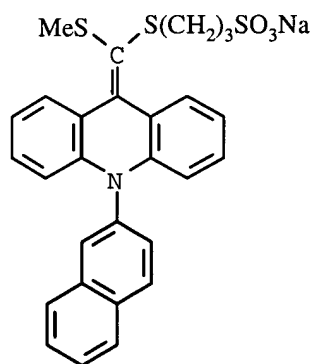




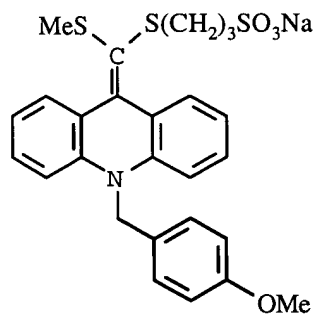
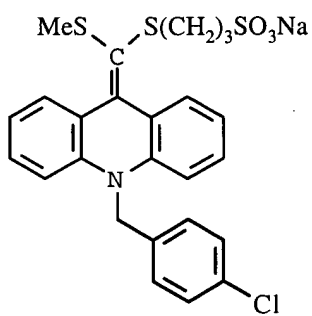
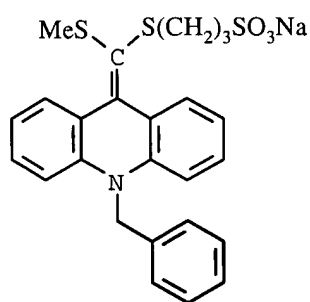
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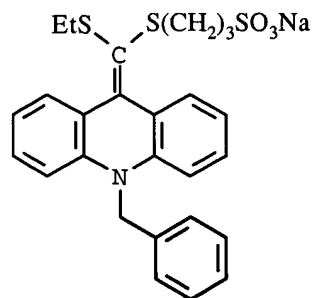
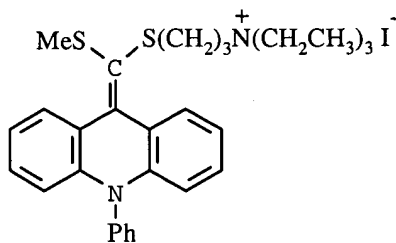
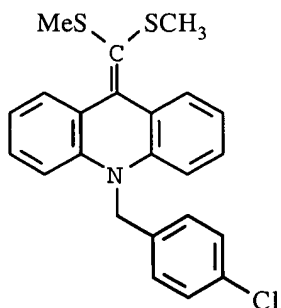
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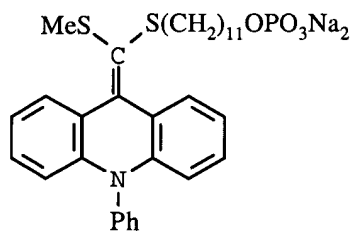
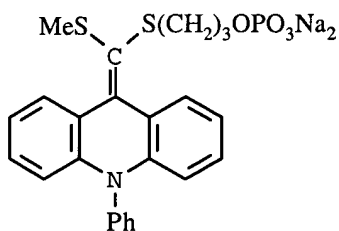
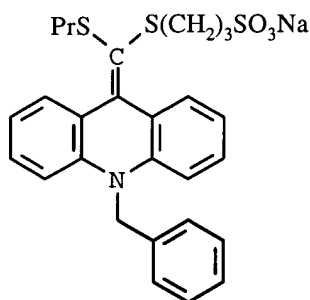
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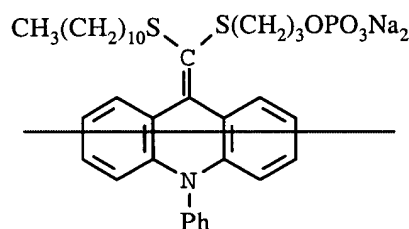
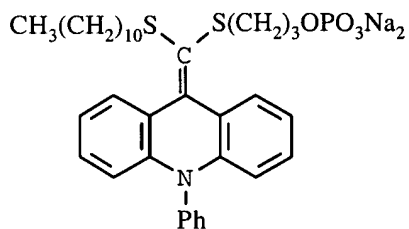
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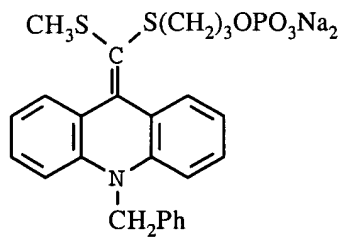
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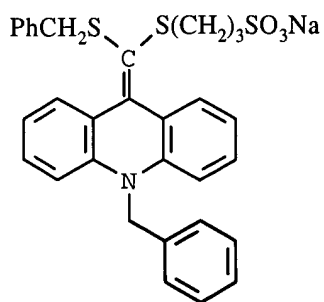
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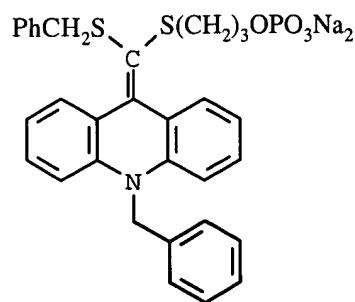
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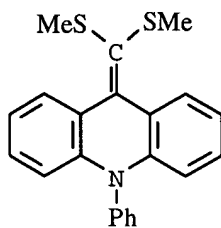


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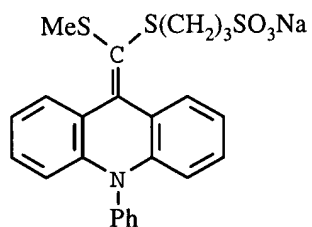
Claim 11 (Original): The compound of Claim 10 which has the formula:

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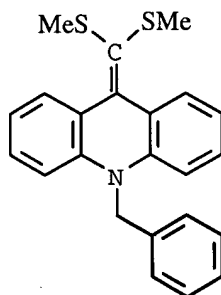
Claim 12 (Original): The compound of Claim 10 which has the formula:

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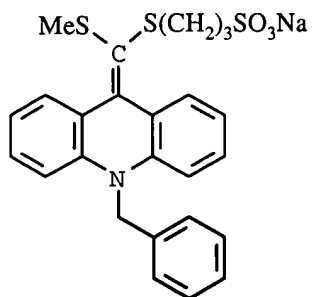
Claim 13 (Original): The compound of Claim 10 which has the formula:

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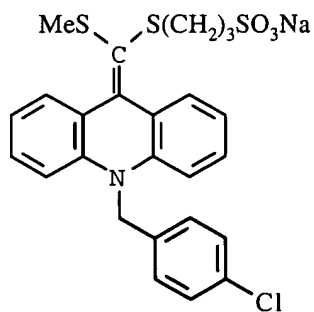
Claim 14 (Original): The compound of Claim 10 which has the formula:

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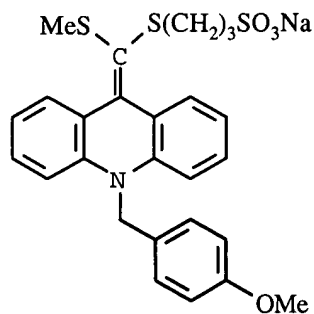
Claim 15 (Original): The compound of Claim 10 which has the formula:

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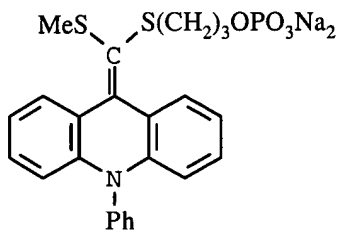


Claim 16 (Original): The compound of Claim 10 which has the formula:

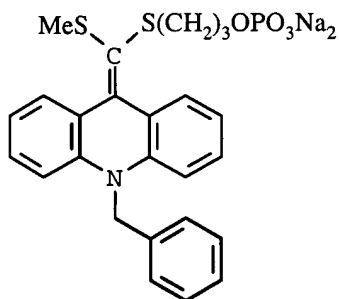
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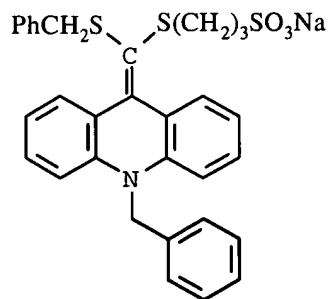
Claim 17 (Currently Amended): ~~16.~~ The compound of Claim 10 which has the formula:



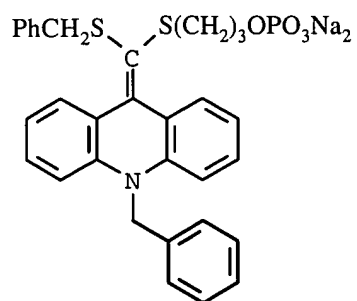
Claim 18 (Currently Amended): ~~17.~~ The compound of Claim 10 which has the formula:



Claim 19 (Currently Amended): ~~18.~~ The compound of Claim 10 which has the formula:



Claim 20 (Currently Amended): ~~19~~ The compound of Claim 10
which has the formula:

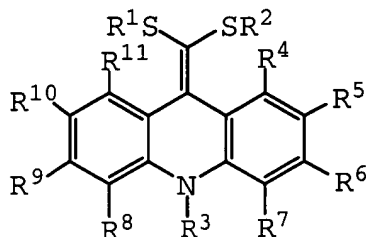


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Claim 21 (New). A method for producing chemiluminescence which comprises reacting a peroxidase enzyme with a peroxide and at least one compound of formula I to produce the chemiluminescence

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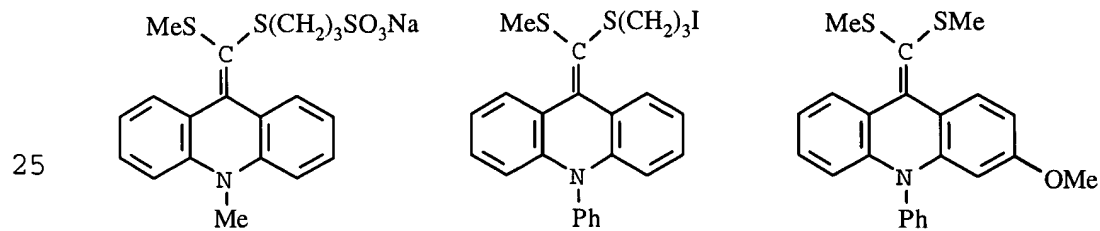
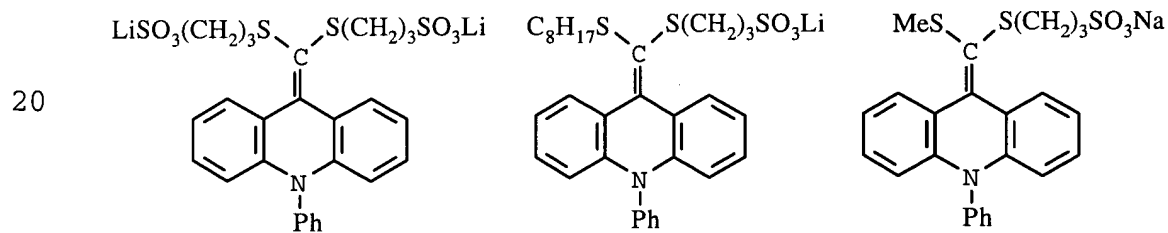
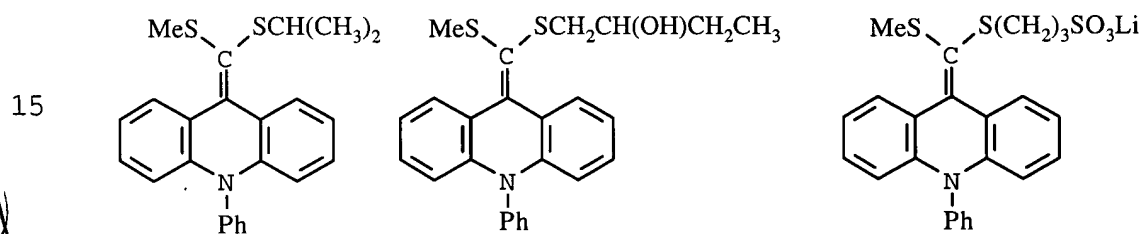
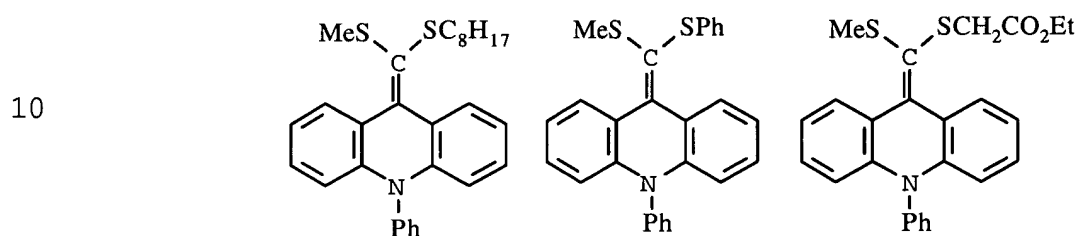
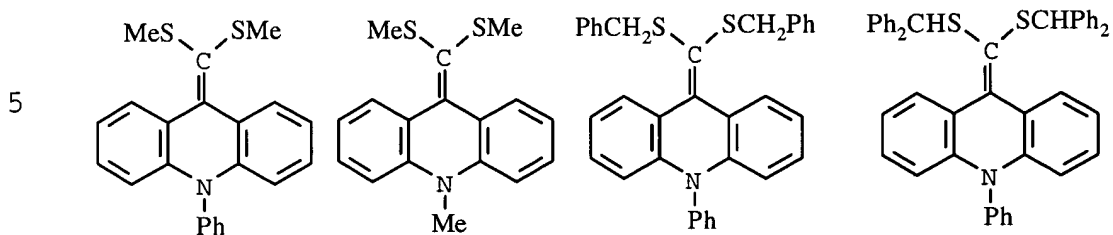


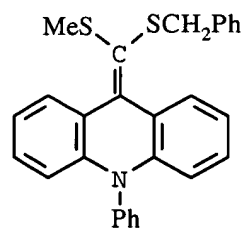
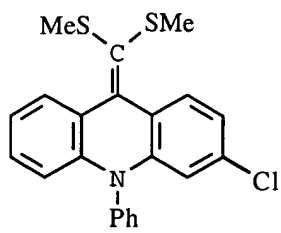
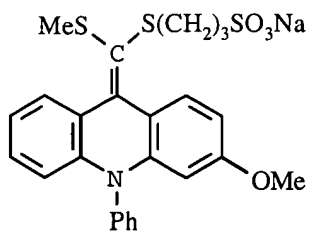
wherein R¹ and R² are independently selected from alkyl, substituted alkyl, aryl, substituted aryl, aralkyl and substituted aralkyl groups of 1-20 carbon atoms, each of R⁴ to R¹¹ is independently a substituent which can contain from 1 to 50 atoms selected from C, H, N, O, S, P, Si and halogen atoms, and R³ is selected from alkyl, substituted alkyl, aryl, substituted aryl, aralkyl and substituted aralkyl groups.

Claim 22 (New). The method of claim 21 further comprising providing an enhancer compound which enhances the activity of the peroxidase.

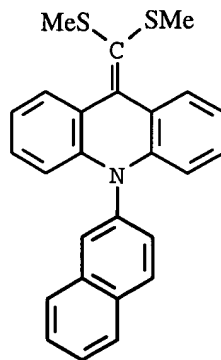
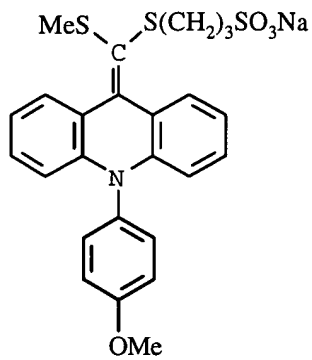
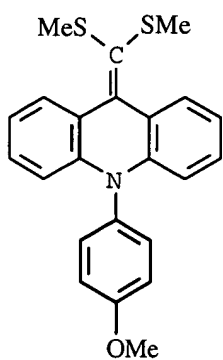
Claim 23 (New). The method of claim 21 further comprising providing an enhancer compound which enhances the activity of the peroxidase, the enhancer being selected from phenolic compounds, aromatic amines, substituted and unsubstituted arylboronic acids, arylboronic esters, arylboronic acid anhydrides, phenoxazines and phenothiazines.

Claim 24 (New): The method of Claim 21 wherein the compound of formula I is selected from the group

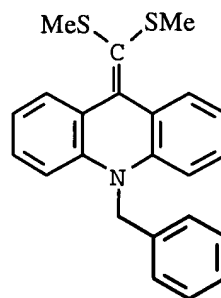
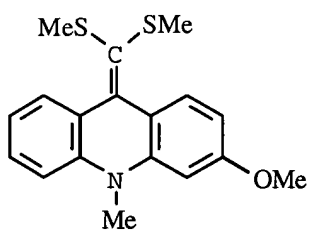
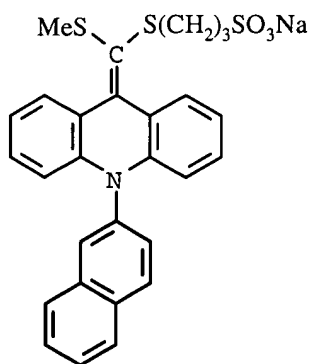




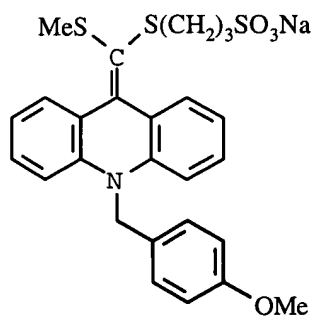
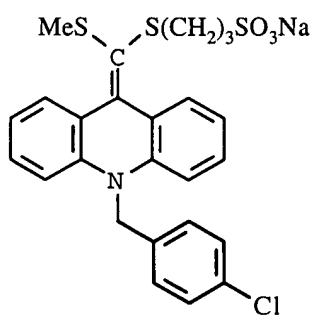
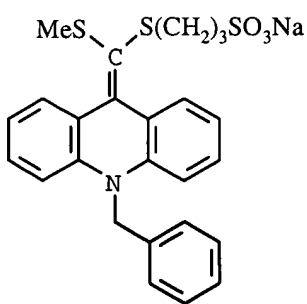
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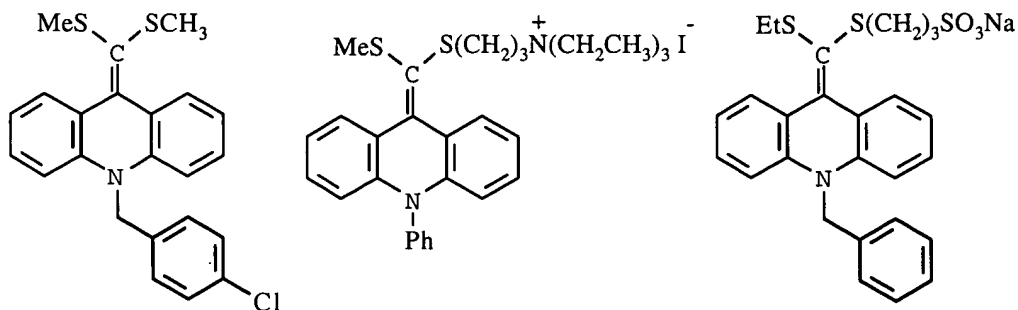
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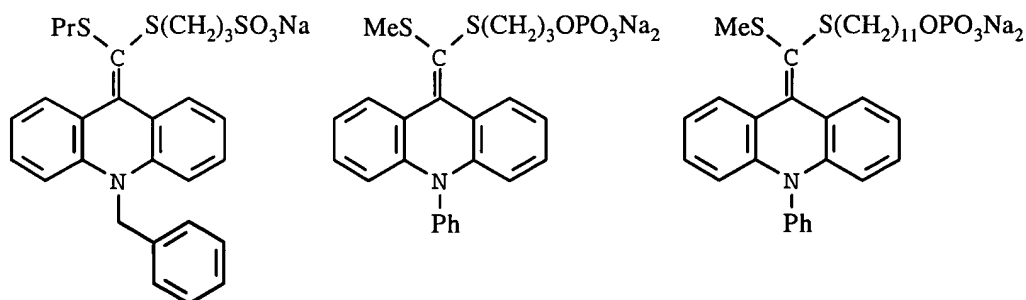
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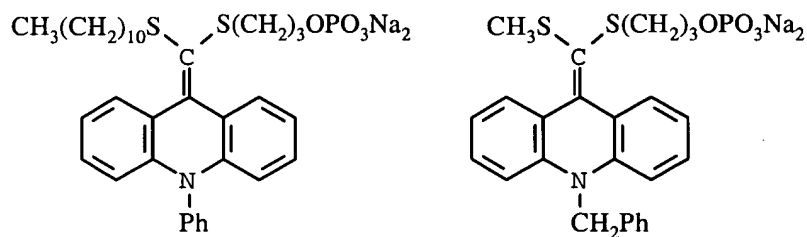
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